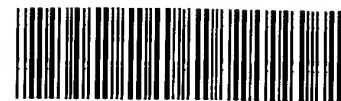


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PATENT APPLICATION: US/10/060,795B

DATE: 11/05/2002 Pib
TIME: 12:39:12

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1 <110> APPLICANT: Civelli Olivier
2     Bunzow, James R.
3     Grandy, David K.
4     Machida, Curtis A.
5 <120> TITLE OF INVENTION: Dopamine Receptors and Genes
6 <130> FILE REFERENCE: 90-1092-CCC
C--> 7 <140> CURRENT APPLICATION NUMBER: US/10/060,795B
8 <141> CURRENT FILING DATE: 2002-01-29
9 <150> PRIOR APPLICATION NUMBER: 09/238977
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14 <151> PRIOR FILING DATE: 1992-11-09
15 <150> PRIOR APPLICATION NUMBER: 07/438544
16 <151> PRIOR FILING DATE: 1989-11-20
17 <150> PRIOR APPLICATION NUMBER: 07/273373
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19 <160> NUMBER OF SEQ ID NOS: 25
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31     cgccttctct ggcgccgggc gccatatggc ttgaagagcc gtgccacca gtggccccac 120
32     tgcccca atg gat cca ctg aac ctg tcc tgg tac gat gac gat ctg gag 169
33         Met Asp Pro Leu Asn Leu Ser Trp Tyr Asp Asp Asp Leu Glu
34         1             5             10
35     agg cag aac tgg agc cgg ccc ttc aat ggg tca gaa ggg aag gca gac 217
36     Arg Gln Asn Trp Ser Arg Pro Phe Asn Gly Ser Glu Gly Lys Ala Asp
37     15             20             25             30
38     agg ccc cac tac aac tac tat gcc atg ctg ctc acc ctc ctc atc ttt 265
39     Arg Pro His Tyr Asn Tyr Tyr Ala Met Leu Leu Thr Leu Leu Ile Phe
40             35             40             45
41     atc atc gtc ttt ggc aat gtg ctg gtg tgc atg gct gta tcc gca gag 313
42     Ile Ile Val Phe Gly Asn Val Leu Val Cys Met Ala Val Ser Ala Glu
43             50             55             60
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DATE: 11/05/2002

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Output Set: N:\CRF4\11052002\J060795B.raw

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47	gct gat ctt ctg gtg gcc aca ctg gta atg ccg tgg gtt gtc tac ctg	409
48	Ala Asp Leu Leu Val Ala Thr Leu Val Met Pro Trp Val Val Tyr Leu	
49	80 85 90	
50	gag gtg gtg ggt gag tgg aaa ttc agc agg att cac tgt gac atc ttt	457
51	Glu Val Val Gly Glu Trp Lys Phe Ser Arg Ile His Cys Asp Ile Phe	
52	95 100 105 110	
53	gtc act ctg gat gtc atg atg tgc aca gca agc atc ctg aac ctg tgt	505
54	Val Thr Leu Asp Val Met Met Cys Thr Ala Ser Ile Leu Asn Leu Cys	
55	115 120 125	
56	gcc atc agc att gac agg tac aca gct gtg gca atg ccc atg ctg tat	553
57	Ala Ile Ser Ile Asp Arg Tyr Thr Ala Val Ala Met Pro Met Leu Tyr	
58	130 135 140	
59	aac aca cgc tac agc tcc aag cgc cga gtt act gtc atg att gcc att	601
60	Asn Thr Arg Tyr Ser Ser Lys Arg Arg Val Thr Val Met Ile Ala Ile	
61	145 150 155	
62	gtc tgg gtc ctg tcc ttc acc atc tcc tgc cca ctg ctc ttc gga ctc	649
63	Val Trp Val Leu Ser Phe Thr Ile Ser Cys Pro Leu Leu Phe Gly Leu	
64	160 165 170	
65	aac aat aca gac cag aat gag tgt atc att gcc aac cct gcc ttt gtg	697
66	Asn Asn Thr Asp Gln Asn Glu Cys Ile Ile Ala Asn Pro Ala Phe Val	
67	175 180 185 190	
68	gtc tac tcc tcc att gtc tca ttc tac gtg ccc ttc atc gtc act ctg	745
69	Val Tyr Ser Ser Ile Val Ser Phe Tyr Val Pro Phe Ile Val Thr Leu	
70	195 200 205	
71	ctg gtc tat atc aaa atc tac atc gtc ctc cgg aag cgc cgg aag cgg	793
72	Leu Val Tyr Ile Lys Ile Tyr Ile Val Leu Arg Lys Arg Arg Lys Arg	
73	210 215 220	
74	gtc aac acc aag cgc agc agt cga gct ttc aga gcc aac ctg aag aca	841
75	Val Asn Thr Lys Arg Ser Ser Arg Ala Phe Arg Ala Asn Leu Lys Thr	
76	225 230 235	
77	cca ctc aag gat gct gcc cgc cga gct cag gag ctg gaa atg gag atg	889
78	Pro Leu Lys Asp Ala Ala Arg Arg Ala Gln Glu Leu Glu Met Glu Met	
79	240 245 250	
80	ctg tca agc acc agc ccc cca gag agg acc cgg tat agc ccc atc cct	937
81	Leu Ser Ser Thr Ser Pro Pro Glu Arg Thr Arg Tyr Ser Pro Ile Pro	
82	255 260 265 270	
83	ccc agt cac cac cag ctc act ctc cct gat cca tcc cac cac ggc cta	985
84	Pro Ser His His Gln Leu Thr Leu Pro Asp Pro Ser His His Gly Leu	
85	275 280 285	
86	cat agc aac cct gac agt cct gcc aaa cca gag aag aat ggg cac gcc	1033
87	His Ser Asn Pro Asp Ser Pro Ala Lys Pro Glu Lys Asn Gly His Ala	
88	290 295 300	
89	aag att gtc aat ccc agg att gcc aag ttc ttt gag atc cag acc atg	1081
90	Lys Ile Val Asn Pro Arg Ile Ala Lys Phe Phe Glu Ile Gln Thr Met	
91	305 310 315	
92	ccc aat ggc aaa acc cgg acc tcc ctt aag acg atg agc cgc aga aag	1129
93	Pro Asn Gly Lys Thr Arg Thr Ser Leu Lys Thr Met Ser Arg Arg Lys	

RAW SEQUENCE LISTING

DATE: 11/05/2002

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TIME: 12:39:12

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Output Set: N:\CRF4\11052002\J060795B.raw

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95      ctc tcc cag cag aag gag aag aaa gcc act cag atg ctt gcc att gtt 1177
96      Leu Ser Gln Gln Lys Glu Lys Lys Ala Thr Gln Met Leu Ala Ile Val
97      335          340          345          350
98      ctc ggt gtg ttc atc atc tgc tgg ctg ccc ttc ttc atc acg cac atc 1225
99      Leu Gly Val Phe Ile Ile Cys Trp Leu Pro Phe Phe Ile Thr His Ile
100          355          360          365
101      ctg aat ata cac tgt gat tgc aac atc cca cca gtc ctc tac agc gcc 1273
102      Leu Asn Ile His Cys Asp Cys Asn Ile Pro Pro Val Leu Tyr Ser Ala
103          370          375          380
104      ttc aca tgg ctg ggc tat gtc aac agt gcc gtc aac ccc atc atc tac 1321
105      Phe Thr Trp Leu Gly Tyr Val Asn Ser Ala Val Asn Pro Ile Ile Tyr
106          385          390          395
107      acc acc ttc aac atc gag ttc cgc aag gcc ttc atg aag atc ttg cac 1369
108      Thr Thr Phe Asn Ile Glu Phe Arg Lys Ala Phe Met Lys Ile Leu His
109          400          405          410
110      tgc tgagtctgcc ccttgccctgc acagcagctg ctteccacct ccctgcctat 1422
111      Cys
112      415
113      gcaggccaga cctcatccct gcaagctgtg ggcagaaagg cccagatgaa cttggccttc 1482
114      tctcgaccct gcaggccctg cagtgttagc ttggctcgat gccctctctt gccacacac 1542
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116      catggctcag ggcagctcac agagtgcctc tctcatatcc agaccctgtc tccttggcac 1662
117      caaagatgca gcggccttcc ttgaccttcc tcttggggcac agaaactagc tcagtggctg 1722
118      agcacaccct gatcgctggc ttggcctggc ccttgcttgc ctgtgccgga tcaggtgggtg 1782
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125      tatccattcc tcacagcaaa tgctggccag tcaggccttg gaccagtgtt ggagttgaag 2202
126      ctggatgtgg taacttgggg ctctttgggg ctgggggggt tgtaaacatc gtctctcttc 2262
127      catatctctt ccttcccagt gcctctgcct tagaagaggc tgtggatggg gtgctgggac 2322
128      tgctgatacc attgggcctg gccctgaatg aggaggggaa gctgcagttt ggagggttct 2382
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130      tcaaaaaaaaa aaa 2455
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139      Asn Trp Ser Arg Pro Phe Asn Gly Ser Glu Gly Lys Ala Asp Arg Pro
140          20          25          30
141      His Tyr Asn Tyr Tyr Ala Met Leu Leu Thr Leu Leu Ile Phe Ile Ile
142          35          40          45
143      Val Phe Gly Asn Val Leu Val Cys Met Ala Val Ser Ala Glu Lys Ala

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145 Leu Gln Thr Thr Thr Asn Tyr Leu Ile Val Ser Leu Ala Val Ala Asp
146    65          70          75          80
147 Leu Leu Val Ala Thr Leu Val Met Pro Trp Val Val Tyr Leu Glu Val
148          85          90          95
149 Val Gly Glu Trp Lys Phe Ser Arg Ile His Cys Asp Ile Phe Val Thr
150          100          105          110
151 Leu Asp Val Met Met Cys Thr Ala Ser Ile Leu Asn Leu Cys Ala Ile
152          115          120          125
153 Ser Ile Asp Arg Tyr Thr Ala Val Ala Met Pro Met Leu Tyr Asn Thr
154          130          135          140
155 Arg Tyr Ser Ser Lys Arg Arg Val Thr Val Met Ile Ala Ile Val Trp
156    145          150          155          160
157 Val Leu Ser Phe Thr Ile Ser Cys Pro Leu Leu Phe Gly Leu Asn Asn
158          165          170          175
159 Thr Asp Gln Asn Glu Cys Ile Ile Ala Asn Pro Ala Phe Val Val Tyr
160          180          185          190
161 Ser Ser Ile Val Ser Phe Tyr Val Pro Phe Ile Val Thr Leu Leu Val
162          195          200          205
163 Tyr Ile Lys Ile Tyr Ile Val Leu Arg Lys Arg Arg Lys Arg Val Asn
164          210          215          220
165 Thr Lys Arg Ser Ser Arg Ala Phe Arg Ala Asn Leu Lys Thr Pro Leu
166    225          230          235          240
167 Lys Asp Ala Ala Arg Arg Ala Gln Glu Leu Glu Met Glu Met Leu Ser
168          245          250          255
169 Ser Thr Ser Pro Pro Glu Arg Thr Arg Tyr Ser Pro Ile Pro Pro Ser
170          260          265          270
171 His His Gln Leu Thr Leu Pro Asp Pro Ser His His Gly Leu His Ser
172          275          280          285
173 Asn Pro Asp Ser Pro Ala Lys Pro Glu Lys Asn Gly His Ala Lys Ile
174          290          295          300
175 Val Asn Pro Arg Ile Ala Lys Phe Phe Glu Ile Gln Thr Met Pro Asn
176    305          310          315          320
177 Gly Lys Thr Arg Thr Ser Leu Lys Thr Met Ser Arg Arg Lys Leu Ser
178          325          330          335
179 Gln Gln Lys Glu Lys Lys Ala Thr Gln Met Leu Ala Ile Val Leu Gly
180          340          345          350
181 Val Phe Ile Ile Cys Trp Leu Pro Phe Phe Ile Thr His Ile Leu Asn
182          355          360          365
183 Ile His Cys Asp Cys Asn Ile Pro Pro Val Leu Tyr Ser Ala Phe Thr
184          370          375          380
185 Trp Leu Gly Tyr Val Asn Ser Ala Val Asn Pro Ile Ile Tyr Thr Thr
186    385          390          395          400
187 Phe Asn Ile Glu Phe Arg Lys Ala Phe Met Lys Ile Leu His Cys
188          405          410          415
190 <210> SEQ ID NO: 3
191 <211> LENGTH: 309
192 <212> TYPE: PRT
193 <213> ORGANISM: Mesocricetus auratus

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RAW SEQUENCE LISTING

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197 Ser His Val Pro Asp His Asp Val Thr Glu Glu Arg Asp Glu Ala Trp
198 20 25 30
199 Val Val Gly Met Ala Ile Leu Met Ser Val Ile Val Leu Ala Ile Val
200 35 40 45
201 Phe Gly Asn Val Leu Val Ile Thr Ala Ile Ala Lys Phe Glu Arg Leu
202 50 55 60
203 Gln Thr Val Thr Asn Tyr Phe Ile Asp Ser Leu Ala Cys Ala Asp Leu
204 65 70 75 80
205 Val Met Gly Ile Ala Val Val Pro Phe Gly Ala Ser His Ile Ile Met
206 85 90 95
207 Lys Met Trp Asn Phe Gly Asn Phe Trp Cys Glu Phe Trp Thr Ser Ile
208 100 105 110
209 Gln Val Leu Cys Val Thr Ala Ser Ile Glu Thr Leu Cys Val Ile Ala
210 115 120 125
211 Val Gln Arg Tyr Ile Ala Ile Thr Ser Pro Phe Lys Tyr Gln Ser Leu
212 130 135 140
213 Leu Thr Lys Asn Lys Ala Arg Met Val Ile Leu Met Val Trp Ile Val
214 145 150 155 160
215 Ser Gly Leu Thr Ser Phe Ile Pro Ile Gln Met His Trp Tyr Arg Ala
216 165 170 175
217 Thr His Gln Lys Ala Ile Asp Cys Tyr His Arg Glu Thr Cys Cys Asp
218 180 185 190
219 Phe Phe Tyr Asn Gln Ala Tyr Ala Ile Trp Ser Ser Ile Val Ser Phe
220 195 200 205
221 Tyr Val Pro Leu Val Val Met Val Phe Val Tyr Ser Arg Val Phe Gln
222 210 215 220
223 Val Ala Lys Arg Gln Leu Gln Lys Ile Lys Glu His Lys Ala Leu Lys
224 225 230 235 240
225 Thr Leu Gly Ile Ile Met Gly Ile Phe Thr Leu Cys Trp Leu Pro Phe
226 245 250 255
227 Phe Ile Val Asn Ile Val His Val Ile Gln Asp Asn Leu Ile Pro Lys
228 260 265 270
229 Glu Val Tyr Ile Leu Leu Met Trp Leu Gly Tyr Val Asn Ser Ala Pro
230 275 280 285
231 Asn Pro Ile Ile Tyr Cys Arg Ser Pro Asp Phe Arg Ile Ala Phe Gln
232 290 295 300
233 Glu Ile Leu Cys Leu
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236 <210> SEQ ID NO: 4
237 <211> LENGTH: 307
238 <212> TYPE: PRT
239 <213> ORGANISM: Homo sapiens
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242 1 5 10 15
243 Glu Ala Pro Gly Gly Gly Ala Arg Ala Thr Pro Tyr Ser Leu Gln Val

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 11/05/2002
PATENT APPLICATION: US/10/060,795B TIME: 12:39:13

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:8; N Pos. 230,233,234,274
Seq#:8; Xaa Pos. 77,78,91
Seq#:9; Xaa Pos. 77,78,91

VERIFICATION SUMMARY

DATE: 11/05/2002

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Output Set: N:\CRF4\11052002\J060795B.raw

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L:457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:241
L:459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:241
L:460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:289
L:500 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:64
L:502 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:80